

NOTES ON THE GENUS *ACHARITEA* (*CHLOANTHACEAE*)

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It has seemed worthwhile to place on record here the bibliographic and herbarium notes assembled by my wife, Alma L. Moldenke, and myself on this genus over the past 52 years during our work on the *Verbenaceae*, *Avicenniaceae*, *Stilbaceae*, *Chloanthaceae*, *Symphoremaceae*, and *Nyctanthaceae*, as well as the *Eriocaulaceae*, of the world, even though time does not now permit preparation of the detailed generic monograph originally planned and previously announced. It is the 68th genus thus far treated in this series of papers in this and some other journals. The herbarium acronyms herein employed are the same as used in all the previous papers and are fully explained in *Phytologia Memoirs* 2: 463--469 (1980).

*ACHARITEA* Benth. in Benth. & Hook f., *Gen. Pl.* 2 (2): 1142. 1876.

Bibliography: Benth. in Benth. & Hook. f., *Gen. Pl.* 2 (2): 1142. 1876; Scott Ell., *Journ. Linn. Soc. Lond. Bot.* 29: 43. 1891; Baill., *Hist. Pl.* 11: 81 & 104 (1891) and 12: [487]. 1892; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp. 1, 1: 22. 1893; Briq. in Engl. & Prantl, *Nat. Pflanzenfam.*, ed. 1, 4 (3a): 138, 142, 144, & 160. 1895; Stapf in Hook., *Icon. Pl.* 27: pl. 2685. 1901; Dalla Torre & Harms, *Gen. Siphonog.*, imp. 1, 431. 1904; Post & Kuntze, *Lexicon* 3 & 688. 1904; Thonner, *Flow. Pl. Afr.* 469. 1915; Mildbr., *Notizbl. Bot. Gart. Berl.* 11: 821. 1933; Junell, *Symb. Bot. Upsal.* 1 (4): 56 & 58. 1934; Durand & Jacks., *Ind. Kew. Suppl.* 1, imp. 1, 4. 1941; Mold., *Known Geogr. Distrib. Verbenac.*, ed. 1, 53 & 84. 1942; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp. 2, 1: 22. 1946; Mold., *Alph. List Inv. Names Suppl.* 1: [1]. 1947; H. N. & A. L. Mold., *Pl. Life* 2: 31. 1948; Mold., *Known Geogr. Distrib. Verbenac.*, ed. 2, 123 & 174. 1949; Angely, *Cat. Estat. Gen. Bot. Fan.* 17: 2. 1956; Mold. in Humbert, *Fl. Madag.* 174: 4 & 41--44, fig. 5 (5--8). 1956; Durand & Jacks., *Ind. Kew. Suppl.* 1, imp. 2, 4. 1959; Mold., *Résumé* 155, 227, 404, & 438. 1959; Jacks. in Hook. f. & Jacks., *Ind. Kew.*, imp. 3, 1: 22. 1960; Melchior in Engl., *Syllabus Pfl.*, ed. 12, 2: 436. 1964; F. A. Barkley, *List Ord. Fam. Anthoph.* 76 & 135. 1965; Dalla Torre & Harms, *Gen. Siphonog.*, imp. 2, 431. 1965; Airy Shaw in J. C. Willis, *Dict. Flow. Pl.*, ed. 7, 10. 1966; Mitra, *Elem. Syst. Bot. Angiosp.*, ed. 2 abrdg., 141. 1967; Rouleau, *Guide Ind. Kew.* 4 & 266. 1970; Angely, *Fl. Anal. Fitogeogr. S. Paulo*, ed. 1, 4: 829. 1971; Mold., *Fifth Summ.* 1: 259 & 377 (1971) and 2: 750 & 839. 1971; Airy Shaw in J. C. Willis, *Dict. Flow. Pl.*, ed. 8, 10. 1973; J. Hutchins., *Fam. Flow. Pl.*, ed. 3, 490 & [909]. 1973; Mukherjee & Chanda, *Trans. Bose Res. Inst.* 39: 38 (1976) and 41: 46. 1978; Munir, *Brunonia* 1: 410, 435, & [690]. 1978; Mold., *Phytol. Mem.* 2: 248 & 514. 1980.

A rather rigid, erect, glabrous herb; leaves decussate-opposite, simple, exstipulate, sessile or subsessile, ovate or ovate-lanceolate, marginally entire, glabrous, the ones among the flowers

gradually reduced in size, the uppermost ones bract-like; flowers borne in groups of 1--3 in the leaf-axils, small, subsessile, subsesquid, the upper ones clustered in a unilateral spike; prophylla minute or absent; inflorescence cymose; calyx gamosepalous, inferior, campanulate, submembranous, 10-veined, apically ampliate, glabrous, its rim equally 5-dentate; corolla gamopetalous, infundibular or hypocrateriform, glabrous, zygomorphic, the tube short, subincluded by the calyx, straight, apically somewhat ampliate, the limb short, somewhat bilabiate, 4-lobed, the lobes broad, somewhat unequal, the anterior one somewhat larger than the 3 posterior ones; stamens 4, didynamous, inserted at about the middle of the corolla-tube, included; anthers ovate, 2-celled, basally minutely mucronulate; thecae distinct, parallel, basally minutely mucronulate; style single, terminal, elongate, apically entire and rather obtuse; ovary compound, bicarpellary (but usually one carpel is aborted), superior, 2-celled, each cell 1-ovulate, the carpel edges turning inward from the middle of the ovary and midrib making a false partition, the placenta axile; ovules attached laterally near the base, erect; fruiting-calyx enlarged, apically ampliate, equally 5-toothed; fruit subglobose, included in the mature calyx-tube, indehiscent, unequally 2-celled or by abortion 1-celled, the pericarp membranous; seeds usually one developed, erect, basally attached by a short funiculus, oblong, smooth, with a rather thick testa and a small endosperm; embryo terete, straight; cotyledons 2, short, basally scarcely wider than the rather thick radicle.

Type species: *Acharitea tenuis* Benth.

This appears to be a monotypic genus with much of the general habit of some members of the *Lamiaceae* or *Scrophulariaceae*. It is often included in the *Verbenaceae*, but is apparently very closely related to *Nesogenes* A.DC. It is the type genus of the Tribe *Achariteae* Briq., a tribe variously placed by recent authors in the *Stilbaceae* Lindl., *Dicrastylidaceae* J. Drumm., or *Verbenaceae* J. St.-Hil., as well as in the *Chloanthaceae* (Benth.) J. Hutchins. as herein accepted.

Bentham (1876) comments: "Genus quoad inflorescentiam et calyces primo intuitu Labiatis v. Scrophularineas refert, characteres tamen omnino Verbenacearum, parumque a *Nesogenes* differt, calyce et pericarpio."

It is worth mentioning here that many authors ascribe the names published in Bentham & Hooker, *Genera Plantarum*, to "Benth. & Hook." or "Benth. & Hook. f.", but actually only pages 1217--1258 of this volume and the index were authored jointly; pages 448--869 and 1019--1215 were authored by Bentham alone (and pages 870--1019 by Hooker alone) as clearly and authoritatively stated in "On the joint and separate work of the authors of Bentham & Hooker's *Genera Plantarum*" in *Journ. Linn. Soc. Lond. Bot.* 20: 304--308. 1883.

Junell (1934) asserts that "Die beiden Gattungen *Acharitea* und *Nesogenes* stehen einander offenbar sehr nahe. Zu *Acharitea* würden früher zwei Arten in Madagaskar gezählt. Mildbraed (1933) hat jedoch die eine von diesen Arten, nämlich *A. glandulosa* Scott

Ell., zu *Nesogenes* übergeführt, und er wirft auch die Frage auf, ob nicht *A. tenuis* Benth., auf welcher Art die Gattung gegründet worden war, ebenfalls in *Nesogenes* einzureihen sei. Mildbraed wagt jedoch nicht, diesen Schritt zu tun, da er keine Gelegenheit hatte, Material von dieser Pflanze selbst zu untersuchen."

The Angely (1971) reference in the bibliography (above) is often cited as "1970", the titlepage date, but the work was not actually published until 1971.

Excluded species:

*Acharitea glandulosa* Scott Ell., Journ. Linn. Soc. Lond. Bot. 29: 43. 1891 = *Nesogenes glandulosus* (S. Elliot) Mildbr., *Chloanthaeae*.

*ACHARITEA TENUIS* Benth. in Benth. & Hook., Gen. Pl. 2: 1142. 1876.

Bibliography: see that for the genus as a whole (above).

Illustrations: Mold. in Humbert, Fl. Madag. 174: 41, fig. 5 (5--8). 1956.

An herb with the characters of the genus (above) plus the following: petioles very short or obsolete; leaf-blades 1--2 cm. long, about 3.6 mm. wide, basally abruptly acute or rounded; calyx about 3 mm. long and wide, accrescent and to 4.5 mm. long and wide after anthesis and in fruit.

This endemic species, the type and only recognized species in the genus, inhabits low altitudes in what are probably tropophilous woods in Madagascar. It is based on *Bouton 1857*, said to have been collected on the "ile de Marosse et baie de Bombetoke" in Madagascar, and deposited in the Kew herbarium. This statement of original locality of collection is ambiguous since Marosy island is located in Antongil Bay, on the east coast of Madagascar, while Bombetoke Bay is by the Betsiboka estuary on the west coast! It is probable that two separate collections were given the same collection number, or else the collector collected the material in one of the localities and thought that he had seen what was the same species in the other site. The species is known thus far only from this original collection.

Citations: MADAGASCAR: *Bouton 1857* (K--type, K--isotype, N--isotype, N--photo of type, Z--photo of type).

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